



ENERGY STAR® Program Requirements for Room Air Cleaners

Partner Commitments FINAL DRAFT

Commitment

The following are the terms of the ENERGY STAR Partnership Agreement as it pertains to the manufacturing of ENERGY STAR qualified room air cleaners. The ENERGY STAR Partner must adhere to the following program requirements:

- comply with current ENERGY STAR Eligibility Criteria, defining the performance criteria that must be met for use of the ENERGY STAR certification mark on room air cleaners and specifying the testing criteria for room air cleaners. EPA may, at its discretion, conduct tests on products that are referred to as ENERGY STAR qualified. These products may be obtained on the open market, or voluntarily supplied by Partner at EPA's request;
- comply with current ENERGY STAR Identity Guidelines, describing how the ENERGY STAR labels and name may be used. Partner is responsible for adhering to these guidelines and for ensuring that its authorized representatives, such as advertising agencies, dealers, and distributors, are also in compliance;
- agree not to use quotes or statements related to indoor air quality that misrepresent the views of the EPA Indoor Environments Division in public documents or on the company Web site;

Note: EPA received a request to provide additional guidance and clarification as to what EPA considers "misrepresentation of the views of the EPA Indoor Environments Division". The Indoor Environments Division publishes information and data on indoor air quality to better inform consumers about the potential hazards that exist. EPA does not, however, point to air cleaners as a potential solution to these indoor air quality issues. In fact, the Indoor Environments Division has not taken a position for or against the use of air cleaners. Instead, efforts are made to educate consumers on the facts surrounding air cleaner performance through their Web site (<http://www.epa.gov/iaq>) and other outreach methods. Unfortunately, there have been instances where manufacturers have used this to justify the need for an air cleaner; in some cases taking exact quotes directly from EPA's Web site and educational materials. EPA understands that some manufacturers may be using this information to educate the consumer about indoor air quality, which could benefit the consumer. However, air cleaner manufacturers should not use these facts in such a way as to suggest an endorsement from EPA regarding the ability of an air cleaner to alleviate health effects of indoor air pollution. EPA expects its ENERGY STAR manufacturing partners to respect other initiatives and efforts within the agency. Partners should refrain from taking any statements made by the Indoor Environments Division out of context for purposes of selling air cleaners.

- qualify at least one room air cleaner model as ENERGY STAR within one year of activating the room air cleaner portion of the agreement. When Partner qualifies the product, it must meet the specification (e.g., Tier 1 or 2) in effect at that time;
- provide clear and consistent labeling of ENERGY STAR qualified room air cleaners. The

ENERGY STAR must be clearly displayed on the top/front of the product, on product packaging, in product literature (i.e., user manuals, spec sheets, etc.), and on the manufacturer's Internet site where information about ENERGY STAR qualified models is displayed;

Note: EPA received an inquiry about product labeling requirements. Specifically, the commenter questioned the significance of labeling the unit and suggested that this requirement be delayed until a later date. The ENERGY STAR mark recognizes the significant energy and cost savings associated with qualifying products. EPA strongly believes in consistent use of the ENERGY STAR mark by all partners across various ENERGY STAR product categories so consumers can make informed purchasing decisions.

Please take note that labeling requirements for room air cleaners will also include the placement of consumer information (i.e., disclaimers) on product packaging, instruction manual, and partner Web site. Once a manufacturer joins the program, EPA will allow time for preparation of labels, literature, and packaging to meet these requirements. Moving forward, partners should incorporate ENERGY STAR as the production cycle allows for the creation of new materials. EPA will work closely with its partners in the development of these materials to meet the requirements within a reasonable timeframe.

- provide to EPA, on an annual basis, an updated list of ENERGY STAR qualifying room air cleaners. Once the Partner submits its first list of ENERGY STAR qualified room air cleaner models, the Partner will be listed as an ENERGY STAR Partner. Partner must provide annual updates in order to remain on the list of participating product manufacturers;
- provide to EPA, on an annual basis, unit shipment data or other market indicators to assist in determining the market penetration of ENERGY STAR. Specifically, Partner must submit the total number of ENERGY STAR qualified room air cleaners shipped (in units by model) or an equivalent measurement as agreed to in advance by EPA and Partner. Partner is also encouraged to provide ENERGY STAR qualified unit shipment data segmented by meaningful product characteristics (e.g., capacity, size, speed, or other as relevant), total unit shipments for each model in its product line, and percent of total unit shipments that qualify as ENERGY STAR. The data for each calendar year should be submitted to EPA, preferably in electronic format, no later than the following March and may be provided directly from the Partner or through a third party. The data will be used by EPA only for program evaluation purposes and will be closely controlled. If requested under the Freedom of Information Act (FOIA), EPA will argue that the data is exempt. Any information used will be masked by EPA so as to protect the confidentiality of the Partner;
- notify EPA of a change in the designated responsible party or contacts for room air cleaners within 30 days.

Performance for Special Distinction

In order to receive additional recognition and/or support from EPA for its efforts within the Partnership, the ENERGY STAR Partner may consider the following voluntary measures and should keep EPA informed on the progress of these efforts:

- consider energy efficiency improvements in company facilities and pursue the ENERGY STAR for buildings;
- purchase ENERGY STAR qualified products. Revise the company purchasing or procurement specifications to include ENERGY STAR. Provide procurement officials' contact information to EPA for periodic updates and coordination. Circulate general ENERGY STAR qualified product information to employees for use when purchasing products for their homes;

- ensure the power management feature is enabled on all ENERGY STAR qualified monitors in use in company facilities, particularly upon installation and after service is performed;
- provide general information about the ENERGY STAR program to employees whose jobs are relevant to the development, marketing, sales, and service of current ENERGY STAR qualified product models;
- feature the ENERGY STAR on Partner Web site and in other promotional materials. If information concerning ENERGY STAR is provided on the Partner Web site as specified by the ENERGY STAR Web Linking Policy (this document can be found in the Partner Resources section on the ENERGY STAR Web site at www.energystar.gov), EPA may provide links where appropriate to the Partner Web site;
- provide a simple plan to EPA outlining specific measures Partner plans to undertake beyond the program requirements listed above. By doing so, EPA may be able to coordinate, communicate, and/or promote Partner's activities, provide an EPA representative, or include news about the event in the ENERGY STAR newsletter, on the ENERGY STAR Web pages, etc. The plan may be as simple as providing a list of planned activities or planned milestones that Partner would like EPA to be aware of. For example, activities may include: (1) increase the availability of ENERGY STAR qualified products by converting the entire product line within two years to meet ENERGY STAR guidelines; (2) demonstrate the economic and environmental benefits of energy efficiency through special in-store displays twice a year; (3) provide information to users (via the Web site and user's manual) about energy-saving features and operating characteristics of ENERGY STAR qualified products, and (4) build awareness of the ENERGY STAR Partnership and brand identity by collaborating with EPA on one print advertorial and one live press event;
- provide quarterly, written updates to EPA as to the efforts undertaken by Partner to increase availability of ENERGY STAR qualified products, and to promote awareness of ENERGY STAR and its message.



ENERGY STAR® Program Requirements for Room Air Cleaners

Eligibility Criteria FINAL DRAFT

Below is the **Final Draft** product specification (Version 1.0) for ENERGY STAR qualified room air cleaners. A product must meet all of the identified criteria if it is to earn the ENERGY STAR.

- 1) **Definitions:** Below is a brief description of a room air cleaner and other terms as relevant to ENERGY STAR.
 - A. **Room Air Cleaner:** An electric cord-connected, portable appliance with the primary function of removing particulate matter from the air and which can be moved from room to room.
 1. **Fan with Filter:** Air cleaner that operates with an electrical source of power and contains a motor and fan for drawing air through a filter(s).
 2. **Fan with Filter and Electrostatic Plates:** Air cleaner which operates with a fan and filter(s) that incorporates electrically charged plates or wires to electrostatically collect particulate matter.
 3. **Fan Filter with Ion Generator:** Air cleaner that incorporates an ion generator in addition to a fan and filter.
 4. **Ion Generator:** Air cleaner that incorporates an ion generator only.
 5. **Hybrid:** An air cleaner embodying more than one distinctive cleaning modality.
 6. **Combination Product:** An air cleaner that includes a secondary function, other than air cleaning technology, within the same housing such as a humidifier or dehumidifier.
 7. **Ozone Generator:** A device intended to reduce or eliminate microorganisms within a chamber by means of introducing ozone into the room environment.
 8. **Other Types:** Devices that have the stated capability to reduce the concentration of particulate matter in a room.
 - B. **AHAM:** Association of Home Appliance Manufacturers.
 - C. **ANSI/AHAM AC-1-2002:** A test protocol for measuring the performance of portable household electric cord-connected room air cleaners. AC-1 measures the clean air produced by a room air cleaner as that clean air is defined within the standard. This public standard was developed under the auspices of AHAM and is recognized by ANSI. Throughout this specification, ANSI/AHAM AC-1-2002 will be referred to as AC-1.
 - D. **Clean Air Delivery Rate (CADR):** Within the parameters of AC-1, the measure of the delivery of specified, particulate-free air produced by a household electric, cord-connected room air cleaner. More technically, CADR represents the rate of particulate contaminant reduction in the test chamber when the unit is turned on, minus the rate of natural decay when the unit is not running, times the volume of the test chamber as measured in cubic feet $[(RCR - RND) * V]$. Each type of particulate contaminant receives a test value, which includes: CADR for Dust; CADR for Tobacco Smoke; and CADR for Pollen. **Note:** CADR always measures a unit's performance as a complete system and has no linear relationship to the air movement per se or to the characteristics of any particular filter medium.

- E. Standby Mode: The lowest power consumption mode which cannot be switched off (influenced) by the user and that may persist for an indefinite time when an air cleaner unit is connected to the main electricity supply and used in accordance with the manufacturer's instructions. For purposes of this specification, this is also defined as the mode at which energy is consumed by the air cleaner to support only the secondary consumer features such as: clocks, remote controls, and other programmable functions while the primary function is inactive.
- I. Standby Power: The average power in standby mode, measured in Watts.
- J. True RMS: RMS, or Root Mean Square, refers to the most common mathematical method of defining the effective voltage or current of an AC (alternating current) wave. RMS value is the effective voltage of an AC power source, equivalent to DC (direct current) voltage that would produce the same power dissipation as heat assuming a pure resistance.
- K. UL Standard 867: UL Safety Standard for Electrostatic Air Cleaners.
- 2) Qualifying Products: In order to qualify as ENERGY STAR, a room air cleaner must be covered by one of the definitions in Section 1A and meet the specification requirements provided in Section 3, below. Combination products and ozone generators, as defined in Sections 1A.6 and 7, *cannot* qualify under this specification at this time.
- 3) Energy-Efficiency Specification for Qualifying Products: To determine if a model qualifies, its CADR must be measured according to the latest ANSI/AHAM AC-1 test procedure. For purposes of this specification, CADR for Dust must be used when determining the energy efficiency (CADR/Watt) of the room air cleaner. **Qualifying air cleaner models must produce a minimum 50 CADR for Dust to be considered under this specification.** Only those air cleaner models covered in Section 2 that meet the following criteria may qualify as ENERGY STAR:
- a) **Room air cleaner minimum performance requirement: ≥ 2.0 CADR/Watt (Dust)**

Note: Some stakeholders have provided comments that disagree with EPA's decision to use dust CADR instead of tobacco CADR to measure product performance. These comments are based on claims that tobacco smoke is a better indicator of air cleaner performance because its particles are smaller than dust particles and therefore, more difficult to remove. EPA analyzed its database of air cleaner models and the data published in the 2004 AHAM Directory of Certified Room Air Cleaners, to identify the correlation between the CADR values for dust and tobacco smoke. The data revealed a very close mathematical resemblance between CADR for dust and smoke values: approximately a 1% difference between the two, on average. This is due to the fact that dust particles are easier to hold on a filter due to their larger size; however, more airflow is required to bring the heavier particles to the air cleaner. Tobacco smoke particles on the other hand, are smaller and lighter and apt to remain airborne longer so, the air cleaner must operate longer to capture these particles. As a result, CADR values are typically close for both tobacco smoke and dust in fan-based units. Based on these similarities, and given the fact that gaseous constituents in tobacco smoke are unaccounted for during AC-1 testing, this specification will continue to use the dust CADR value in the energy efficiency ratio provided in Section 3, above.

Note: Once a representative model has qualified as ENERGY STAR, all additional units manufactured under the same model name/number, and found in the distribution channel (i.e., retail; direct sales), must perform **within -5%** of the minimum performance level set in this specification.

Verification Test Protocol

Verification Testing:

EPA may at random select and test certain ENERGY STAR labeled room air cleaner models for verification purposes. Verification testing will be conducted in accordance with the procedures provided in ANSI/AHAM AC-1 and the Energy Consumption Test provided in Section 4 of this

specification. An average CADR/Watt will be measured based upon three separate CADR/Watt readings taken for three separate sample units identical to the representative model that was originally tested and qualified as ENERGY STAR. This average CADR/Watt value must fall within -5% of the value initially reported to EPA and listed on the ENERGY STAR Qualified Product List to remain in compliance with this specification. EPA will conduct the product performance review process according to the guidelines provided below.

Product Performance Review Process:

To the extent ENERGY STAR is a self-certification program, EPA relies on the integrity of participating companies to ensure all products for which ENERGY STAR claims are made, meet all aspects of the ENERGY STAR performance specification. When mistakes are made and products are mislabeled or fail to perform as expected, EPA is committed to ensuring prompt corrective action. In the event EPA is provided test data from a third-party, accredited laboratory or other product information indicating a performance problem or mislabeling situation, EPA will take the following steps:

1. Inform the product manufacturer about the apparent performance and/or labeling problem.
2. Affirm the basis for qualification by requiring any relevant test data not already provided to EPA.
3. In the event that a definitive conclusion cannot be reached based on the manufacturer's response, EPA will make every effort to test the product in question as part of its in-use screening initiative.
4. If EPA concludes, based on the testing performed on behalf of EPA or an independent entity in accordance with the ENERGY STAR specified test procedure, that the product in question does not fully qualify with the ENERGY STAR performance criteria, the product manufacturer will be asked to provide a "corrective action" plan to EPA outlining the process by which the product will be modified and retested so that qualification with the specification will be demonstrated within 90 days.
5. If the product manufacturer fails to submit a corrective action plan or exceeds the deadline for implementing it, the product in question will be removed from the Qualified Product List on the ENERGY STAR Web site. At this time, manufacturing partner will be notified of EPA's decision, and will be asked to stop labeling the affected product (i.e. model number) and associating it with the ENERGY STAR immediately.
6. EPA may take action to terminate the partnership with manufacturers whose products are repeatedly found to be in violation of the ENERGY STAR specification requirements.

Note: A number of stakeholders commented that the proposed -3% tolerance for verification testing was too stringent and recommended that it be revised to be more in line with the CADR tolerance allowed under AC-1, which is $\pm 10\%$. Following numerous discussions with industry members, and upon re-evaluation of the air cleaner performance data submitted by manufacturers, EPA has decided to increase the verification testing tolerance to -5%. This -5% tolerance would only apply to the testing of models already qualified as ENERGY STAR for performance verification purposes only. Models qualifying for the first time would be required to meet or exceed the 2.0 CADR/Watt level. The -5% tolerance would apply to the average of three separate CADR/Watt measurements recorded for three separate sample units identical to the representative model originally tested and qualified as ENERGY STAR. EPA feels that this new -5% tolerance is a reasonable level to compensate for instrumentation errors, and other slight variations in product manufacturing and in test conditions of utilized laboratories that could occur during verification testing.

A new verification test protocol and the product review process have been added above to Section 3 for clarification purposes. Similar to initial product qualification testing, verification testing will be conducted in accordance with the AC-1 test and the Energy Consumption Test Procedure provided below in Section 4.

- b) **UL Safety Requirements:** For models that emit ozone as a byproduct of air cleaning, the ozone production by the room air cleaner must not exceed 50 ppb in accordance with the UL Standard 867.

Note: An industry member expressed concern that UL Standard 867 did not adequately protect the consumer from ozone emissions. It is EPA's understanding that a large number of room air cleaner models in today's market emit some levels of ozone as a byproduct during operation. Excluding these units from the specification would eliminate a number of energy-efficient room air cleaners that would otherwise qualify as ENERGY STAR. EPA adopted UL Standard 867, which is well known to the industry, to address the concern of elevated levels of ozone. However, it is not EPA's intention to challenge the UL Standard level or suggest a new safety level at this time. By adopting UL Standard 867 for purposes of this specification, EPA intends to identify an acceptable safety threshold for units that emit ozone as a byproduct of air cleaning for eligibility under ENERGY STAR. Units that produce high levels of ozone primarily to clean air (i.e., ozone generators) will not qualify for this specification.

- c) **Standby Power:** ≤ 2 Watt(s) while in standby mode to activate secondary consumer features. Standby power must be tested in accordance with the Standby Power Test Procedure outlined below. This test procedure was developed in accordance with the International Electrotechnical Commission (IEC) document "IEC Standard 62301, Ed. 1.0: Household Electrical Appliances – Measurement of Standby Power". For detailed instructions on this test procedure, please refer to the IEC Standard 62301. **Note: The IEC Standard 62301 is currently in Draft form; however, EPA will expect the manufacturing partners to conduct standby power measurements using the following test procedure and report results.** For information about how to obtain a copy of the standard, visit the IEC "Web Store" at www.iec.ch.

Test Procedure for Measuring Standby Power

1. **Test Conditions and Equipment**

a. **Test Room:**

The tests shall be carried out in a room that has an air speed close to the air cleaner under test of ≤ 0.5 m/s. The ambient temperature shall be maintained at (23 ± 5) °C throughout the test. **Note:** The measured power for some products and modes may be affected by the ambient conditions (e.g. illuminance, temperature).

b. **Test Instrumentation:**

The power measurement instrument shall have an accuracy of one percent and a resolution of 0.01 Watt or better. Voltage supply shall be at 115 volts, plus or minus 1 volt.

2. **Measurements**

Preparation of Room Air Cleaner Model for Testing:

Tests are to be performed on a single room air cleaner model. The room air cleaner model shall be prepared and set up in accordance with the manufacturer's instructions, except where these conflict with the requirements of this test procedure. If no instructions are given, then factory or "default" settings shall be used, or where there are no indications for such settings, the air cleaner model is tested as supplied.

For portable air cleaners having a rechargeable battery, standby mode is measured on the charger or docking/base station with the air cleaner detached from its regular source of power in the 'on' position.

3. **Test Procedure**

This test procedure may only be used where the selected mode and measured power are stable. A variation of less than 5% in the measured power over 5 minutes is considered stable for the purposes of testing for standby power usage under this specification. Instrument power readings may be used in this case.

Connect the air cleaner model to be tested to the metering equipment in the stable mode. After the air cleaner model has been allowed to stabilize for at least 5 minutes, monitor the power consumption for not less than an additional 5 minutes. If the power level does not drift by more than 5% (from the maximum value observed) during the latter 5 minutes, the load can be considered stable and the power can be recorded directly from the instrument at the end of the 5 minutes.

4. Test Results

Standby power must be reported to EPA as the average power in Watts rounded to the second decimal place.

Note: EPA received comments regarding the appropriateness of referencing IEC Standard 62301 while it is still in draft form. The latest Draft version was distributed to IEC committee members on November 28, 2003 for committee vote. The closing date for voting is April 30, 2004. EPA has learned that a subsequent Final Draft will be issued for committee consensus before the standard can be finalized, which could take up to several months.

In addition to active power, EPA is beginning to collect standby data to capture energy consumption while the product is in standby mode across a number of existing ENERGY STAR product categories. Where applicable, it is EPA's intention moving forward to collect standby power data for all new product categories being developed, including room air cleaners. It is not in EPA's interest to delay this requirement when according to industry sources, a number of air cleaners actually use less than 2 Watts in standby. While industry waits for the test procedure to be finalized, EPA is adopting certain testing and reporting sections provided in the latest Draft IEC Standard 62301 for measuring the standby power in air cleaners. Partners are expected to conduct standby power tests according to the test method outlined above in Section 3(c).

- 4) Testing and Reporting Procedures: Manufacturers are required to perform tests according to the requirements outlined in this specification, and submit self-certification information to EPA on models that they intend to qualify as ENERGY STAR.

A. In performing these tests, partner agrees to measure CADR according to the latest ANSI/AHAM AC-1 Standard. (Go to www.aham.org for information regarding the latest edition of the ANSI/AHAM AC-1 Standard). Also, during the ANSI/AHAM AC-1 test, a watt meter or equivalent measuring instrument shall be required to quantify the energy consumption of the model. The test protocol for measuring energy consumption of the air cleaner is provided below.

Energy Consumption Test Protocol

Purpose: This protocol formalizes the process of testing the electrical energy consumption of room air cleaners.

Conditions of Test: The test described in this protocol should be conducted under the following conditions:

Ambient room-temperature:	70° F ± 5° F [21° C ± 1.5° C]
Relative humidity:	40% RH ± 5% RH
Electrical frequency:	60 Hertz ± 1 Hertz
Voltage:	120 volts ± 1 volt

Conditioning of Room Air Cleaner Unit Before Test: Testers should assure that the air cleaner unit's motor is properly broken in by running the unit, without filters, for 48 hours.

Testing Instrumentation: Under this Final Draft specification, a watt meter, or equivalent instrument capable of measuring true RMS watts with an accuracy of ± 1% at 120 volts, 60 Hertz; calibrated

within the last 12 months to a standard traceable to the U.S. National Institute for Standards and Technology (NIST) should be used to measure the total watts consumed.

Test Procedure: After the unit motor has been properly conditioned, in accordance with equipment manufacturer's instructions, connect the test instrument between the power supply and the air cleaner unit under test and follow steps 1-3, below:

Step 1: Turn the air cleaner ON with all settings/options (i.e., filter check indicator, fan control, etc.) set at maximum level and reset the power-measuring instrument (this will ensure capture of the full cycle power consumption).

Step 2: Adjust the power supply indicator to 120V - 60 Hz.

Step 3: Allow the air cleaner to run for 2 minutes without taking watt readings. After this 2-minute initial runtime, begin recording watt readings at one-minute intervals for 13 minutes. The entire energy consumption test will take 15-minutes total.

Testing Notes:

Three of the 13 readings may be thrown out as anomalous to address potential line surges and other variables. The average of the 10 remaining data points constitutes the electrical energy consumption by the unit.

In the instance that energy consumption is measured using a unit other than watts (e.g. watt-hours), convert and record wattage consumed.

B. Test results must be reported to EPA using the Room Air Cleaner Qualifying Product Information (QPI) Form.

- 5) **Consumer Information:** In addition to placing the ENERGY STAR label on the product packaging of ENERGY STAR qualified air cleaners, the following statement must be included on the same panel of the box:

"Room air cleaners earn the ENERGY STAR mark by meeting strict energy efficiency guidelines set by the US EPA. US EPA does not endorse manufacturer claims regarding healthier indoor air, or associated health benefits, from the use of this product."

Note: The language provided above has been slightly modified based on input received on Draft 2 version, to include the voice of authority for ENERGY STAR and to clearly state EPA's position on additional claims that may be made regarding air cleaner performance outside of energy efficiency.

A preferred graphic with the above disclaimer language will be provided by EPA to partners to be used on packaging for qualified air cleaner units.

Instruction Manual and Partner Web Site:

In addition to the text provided above, the following statement must be included in the Instruction Manual that is shipped with the qualified model and on the partner's Web site.

"The energy efficiency of this ENERGY STAR qualified model is measured based on a ratio between the model's CADR for Dust and the electrical energy it consumes, or CADR/Watt."

The placement of this statement must be in close proximity to the ENERGY STAR mark and any text describing the ENERGY STAR program and/or qualified products.

- 6) **Effective Date:** The date that manufacturers may begin to qualify products as ENERGY STAR will be defined as the *effective date* of the agreement. The ENERGY STAR Room Air Cleaner specification effective date is **TBD**.

Note: Industry members requested further clarification on what the proposed effective date represented. This is the date at which ENERGY STAR partners may begin qualifying and promoting air cleaner models as ENERGY STAR. Please note that manufacturers must sign a Partnership Agreement to join the ENERGY STAR room air cleaner program prior to submitting products for ENERGY STAR qualification. As an ENERGY STAR partner, the manufacturer will be given access to the ENERGY STAR logos for use on qualifying models, product and marketing literature, and their Web site.

EPA received a number of comments and questions from stakeholders on the Draft 2 document, which required additional research and industry discussions prior to distributing a Final draft document. It was EPA's hope to finalize the specification prior to the International Home & Housewares Show, in Chicago, March 20-22, 2004. However, it is also important to EPA that these issues are thoroughly explored and adequately addressed. In doing so, EPA had to postpone the proposed specification effective date of March 15, 2004. ENERGY STAR representatives will be present at the International Home & Housewares Show on March 20 and 21, to discuss this Final draft specification and determine a new effective date. **All stakeholders are encouraged to provide comments on this Final draft version by April 22, 2004**

- 7) Future Specification Revisions: EPA reserves the right to change the specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. In keeping with current policy, revisions to the specification are arrived at through stakeholder discussions. **In the event of a specification revision, please note that ENERGY STAR qualification is not automatically granted for the life of a product model.** To carry the ENERGY STAR, a product model must meet the ENERGY STAR specification in effect on the model's date of manufacture. The date of manufacture is specific to each unit and is the date on which a unit is considered to be completely assembled.